



SWIFT Input File No.:	Model Run Description	Input Parameters	Parameter Value
ExMob_D HiDens.dat	Lateral migration of high density waste plume during 10,000 years in Frio D Sand. End of operations on December 31, 2020. Historical injection from July 1, 2008 until December 31, 2008 at 140 gpm into WDW-397. Future injection at 360 gpm from January 1, 2009 until December 31, 2020 into WDW-397 (0 gpm into WDW-398)	Reservoir Flow Capacity Hydraulic Conductivity Intrinsic Permeability (k) Porosity Reservoir Thickness (h) Reservoir Dip Injectate Density Injectate Specific Gravity Injectate Viscosity* Reservoir Brine Density Reservoir Brine Specific Gravity Reservoir Brine Viscosity* Ground Water Flow Rate Rock Compressibility Fluid Compressibility Reservoir Temperature SWIFT Effective Diffusion Coefficient Longitudinal and Lateral Dispersivity	50,000 mD-ft 11.488 ft/day 2,000 mD 0.28 25 ft 1.145° NW to SE 64.49 lb/ft ³ @ 164°F 1.05 @ 60 °F 0.452 cP @ 164 °F 66.27 lb/ft ³ @ 164 °F 1.083 @ 60 °F 0.548 cP @ 164 °F 0.0 ft/yr NW to SE 3.20 x 10 ⁻⁶ psi ⁻¹ 2.43 x 10 ⁻⁶ psi ⁻¹ 164 °F 7.93 x 10 ⁻⁴ ft ² /day 100 ft and 10 ft

* variable viscosity with temperature from 60 °F to 200 °F

NOTE: Shaded area represents area of 0 (zero) thickness in the ExMob_D Pressure model. This simulates the shale out or pinchout of the Frio D Sand. The shaded grid cells were made inactive via use of the R1-26 (FPV=0) Card.

MODEL RESULTS SUMMARY: The shape of both the end of operations waste plume and the 10,000-year waste plume are affected by the fault-bounded edge to the southeast and the stratigraphic thinning to the east and northeast. The end of operation waste plume is oval in shape. The end of operations waste plume is approximately 15,800 feet long along the north-south axis and approximately 13,900 feet wide along the east-west axis. The end of operations waste plume center of mass is shifted about 1,800 feet west of the WDW-397 well location. The 10,000-year waste plume extends 39,200 feet up-gradient toward Clinton Dome and 14,000 feet to the northeast toward the area where the Frio D Sand pinches out (measured from the WDW-397 well location). The 10,000 year waste plume extends about 13,700 feet to the southwest and 7,625 feet southeast of WDW-397. The 10,000-year waste plume has a width of about 22,400 feet across the Clinton Dome.

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PLATE 7-19

TERRA
DYNAMICS INC

**LATERAL MIGRATION
MODEL GRID AND RESULTS
(ExMob_D HiDens)**

(Frio D Sand High Density Lateral Migration Model)

PREPARED FOR

**EXXON MOBIL CORPORATION
PASADENA, TEXAS**

DRAWN BY: tdm	SCALE: As Indicated	DATE: Revised: 02-24-2011
DESIGNED BY: SAME		JOB NO.: 11-101
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